

REMARKS

Initially, Applicants would like to thank the Examiner for his indication of the allowability of claims 3, 7-11, 14 and 18-20, if rewritten into independent form to include all of the limitations of the base and intervening claims. Applicants would also like to thank the Examiner for his indication of the allowability of claims 12 and 15-17 if amended to overcome rejections under 35 U.S.C. §112, second paragraph, and if rewritten into independent form to include all of the limitations of the base and intervening claims.

Applicants further thank the Examiner for acknowledging acceptance of the drawings filed on July 13, 2001. Applicants also thank the Examiner for acknowledging Applicants' claims for priority under 35 U.S.C. §119, as well as receipt of copies of the certified copies of the priority documents from the International Bureau. Applicants further thank the Examiner for acknowledging consideration of the Information Disclosure Statements filed on September 20, 2004, August 2, 2001 and July 11, 2001 by signing the PTO-1449 forms submitted therewith, as well as for acknowledging consideration of each of the documents cited therein by placing his initials next to the citation to each document listed on the above-noted PTO-1440 forms.

In the above-noted Official Action, claims 6, 12 and 15-17 were rejected under 35 U.S.C. §112, second paragraph, as indefinite. Claims 1, 2, 4 and 6 were rejected under 35 U.S.C. §103(a) over RASMUS et al. (U.S. Patent No. 6,091,806) in view of FISCHER et al. (U.S. Patent No. 6,257,581). Claim 5 was rejected under 35 U.S.C. §103(a) over RASMUS in view of FISCHER, and further in view of NOLL (Introduction to

Telecommunications Electronics). Claim 13 was rejected under 35 U.S.C. §103(a) over RASMUS in view of FISCHER, and further in view of DITTMER (Linear Technology Magazine).

Claims 3, 7-11, 14, and 18-20 were indicated as allowable, if rewritten into independent form to include all of the limitations of the base claim and any intervening claims. Claims 12 and 15-17 were indicated as allowable, if amended to overcome rejections under 35 U.S.C. §112, second paragraph, and if rewritten into independent form to include all of the limitations of the base and intervening claims.

Upon entry of the present amendment, claims 1-20 will have been canceled and claims 21-40 will have been added for consideration by the Examiner. In view of the cancellation of claims 1-20, Applicants respectfully submit that each of the above-noted rejections and objections is moot. Further, in view of the newly added claims and the herein-contained remarks, Applicants respectfully submit that each of the claims now pending is in condition for allowance.

Claim 32 corresponds to original claim 3, rewritten to include substantially all of the features of original independent claim 1, and revised to even more clearly recite the features of the claimed invention. Claims 33-35 correspond to original claims 7, 18 and 8, respectively, dependent (directly or indirectly) from claim 32 and revised to even more clearly recite the features of the claimed invention. Claim 36 corresponds to original claim 9, rewritten to include substantially all of the features of original independent claim 1, and revised to more clearly recite the features of the claimed invention. Claims 37-40 correspond to original claims 10, 12, 20 and 11 respectively, dependent (directly or

indirectly) from claim 36 and revised to more clearly recite the features of the claimed invention. At least because of the Examiner's previous indication of the allowability of the subject matter recited in original dependent claims 3 and 9, Applicants submit that each of independent claims 32 and 36 is now in condition for allowance. Applicants further submit that each of claims 33-35 and 37-40 are allowable at least for depending, directly or indirectly, from an allowable independent claim, as well as for additional reasons related to their own recitations.

Claims 21 corresponds to original claim 1, revised to more clearly recite the features of the claimed invention, but without narrowing the scope of the same. Claims 22-31 correspond to original claims 2, 14, 19, 4, 13, 15, 5, 16, 6 and 17 respectively, dependent from claim 21 and revised to more clearly recite the features of the claimed invention.

In this regard, the rewritten claims have been reviewed to ensure that each of the features recited therein is definite under 35 U.S.C. §112, second paragraph. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections under 35 U.S.C. §112, second paragraph.

Applicants traverse the rejection of claim 1 under 35 U.S.C. §103(a). In this regard, claim 21, which recites subject matter similar to that recited originally in claim 1, has been submitted for consideration by the Examiner. In the claimed combination, claim 21 recites "wherein a digital controller having a programmable digital filter sets the ringing impedance according to predetermined conditions by generating, from the ringing alternating voltage, a control voltage for controlling the first transistor, and wherein a

transmission function of the programmable digital filter can be set by programming filter coefficients”. With respect to the similar limitations recited in original claim 1, the outstanding Official Action admits that RASMUS does not disclose “the digital controller having a programmable digital filter with a transmission function set by programming filter coefficients”. However, the outstanding Official Action asserts that “it would have been obvious to one skilled in the art at the time of the invention to apply a programmable digital filter with a transmission function set by programming filter coefficients as taught by FISCHER to the apparatus taught by RASMUS”. Applicants respectfully submit that the outstanding Official Action is in error.

RASMUS discloses a modem microprocessor 102 that provides parameter information to digital-to-analog converter 230. However, as admitted in the outstanding Official Action, the modem microprocessor 102 does not include a programmable digital filter. RASMUS also discloses, at column 12, lines 57-61, that digital-to-analog converter 230 controls the gain of amplifier 612 to therefore effectively control the resistance of variable resistor 238. Further, as shown in FIG. 6 of RASMUS, the variable resistor 238 includes an amplifier 612, an operational amplifier 610, a transistor 608, resistors R10, R11 and R12, and a capacitor 602 (C3). In other words, the variable resistor 238 includes numerous components that would have to be considered (*i.e.* modified and/or reconfigured) in any attempt to achieve a desired impedance using a programmable digital filter in RASMUS.

Accordingly, providing a programmable digital filter to set a ringing impedance in FIGs 2/6 in RASMUS would require substantial modification to the complicated circuit

arrangement shown in FIGs 2/6 of RASMUS. In particular, if a digital filter were provided to the modem micro-processor 102 in RASMUS, analog signals output through the digital to analog converter 230 would still be subject to impedance considerations from the elements of the variable resistor 238, e.g., elements R10, R11, R12 and C3. The impedance considerations from these additional elements of the variable resistor 238, would (at the least) interfere with obtaining a desired impedance using a programmable digital filter. Accordingly, even if it were possible to use a programmable digital filter in RASMUS to control the transistor Q2 in FIG. 6, the remaining elements that require consideration would have to be eliminated or modified. Such modifications, if they could be made at all, would destroy the teachings of the very specific circuit apparatus shown in RASMUS.

In other words, modifying the circuit arrangement of RASMUS in the manner suggested in the outstanding Official Action, if it is even possible, would require at least complicated and extensive modification of the existing circuit shown in the FIGs. 2 and 6. Accordingly, even if such modifications were possible, the extensive and complicated nature of modifying such an analog circuit would actually provide motivation to one of ordinary skill in the art not to modify the circuit arrangement of RASMUS in the manner suggested by the Examiner.

Accordingly, Applicants respectfully submit that there is no motivation to modify the circuit arrangement of RASMUS in the manner asserted in the outstanding Official Action. Furthermore, complicating the circuit arrangement of RASMUS by providing a programmable digital filter upstream of the variable resistor 238 in RASMUS would

destroy the work was required to obtain the circuit arrangement of the variable resistor that is disclosed. Accordingly, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to modify the circuit shown in RASMUS, and it is unclear whether such modification is even feasible without destroying the features and benefits of RASMUS.

Accordingly, Applicants respectfully submit that claim 21 is allowable at least for the reasons set forth above. Applicants additionally submit that claims 22-31 are allowable at least for depending, directly or indirectly, from an allowable independent claim 21, as well as for additional reasons related to their own recitations.

Accordingly, reconsideration and withdrawal of each of the outstanding objections and rejections is respectfully requested in view of the above-noted amendments and remarks. Applicants additionally request an indication of the allowability of each of the claims now pending, and submit that each of the claims now pending is in condition for allowance.

SUMMARY AND CONCLUSION

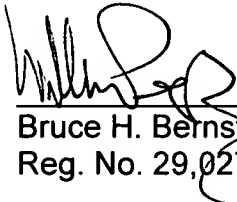
Applicants have made a sincere effort to place the present application in condition for allowance, and believe that they have now done so. Applicants have presented new claims to more clearly recite the features of the present invention, including new independent claims 32 and 36 which recite features from claims previously indicated by the Examiner as containing allowable subject matter. Applicants have also explained how the features of new independent claim 21 are not disclosed or suggested by the references applied by the Examiner. Accordingly, Applicants respectfully request reconsideration of the outstanding rejection, as well as an indication of the allowability of each of the claims now pending in due course.

Any newly presented features of the claims, which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been added for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions regarding this paper, please contact the undersigned at the below listed number.

Respectfully submitted,
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